

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Terrestrial Use of the 2473-2495 MHz Band for)	
Low-Power Mobile Broadband Networks;)	IB Docket No. 13-213
Amendments to Rules for the Ancillary Terrestrial)	RM-11685
Component of Mobile Satellite Service Systems)	

To: The Commission

**REPLY COMMENTS OF
THE WIRELESS INTERNET SERVICE PROVIDERS ASSOCIATION**

The Wireless Internet Service Providers Association (“WISPA”), pursuant to Sections 1.415 and 1.419 of the Commission’s Rules, hereby replies to certain of the Comments filed in response to the Notice of Proposed Rulemaking (“*NPRM*”) released by the Commission on November 1, 2013 in the above-captioned proceeding.¹ The existing record shows scant support for adoption of rules that would enable Globalstar, Inc. (“Globalstar”) to implement its proposed Terrestrial Low Power Service (“TLPS”) in the 2473-2495 MHz band. To the contrary, a large and broad consensus of commenters voiced strong opposition to Globalstar’s plans based on unanswered questions about the potential for harmful interference to licensed and unlicensed users and the privately managed nature of the proposed TLPS. Globalstar’s own Comments fail to recognize that the Commission can and should require interference testing before adopting TLPS rules. Globalstar further fails to acknowledge the Commission’s obligation to consider the interference impact on millions of unlicensed devices already providing vital services to the public. The slim record does not support adoption of the rules proposed in the *NPRM*.

¹ *Terrestrial Use of the 2473-2495 MHz Band for Low-Power Mobile Broadband Networks; Amendments to Rules for the Ancillary Terrestrial Component of Mobile Satellite Service Systems*, IB Docket No. 13-213, FCC 13-147 (2013) (“*NPRM*”).

Discussion

I. THE EXISTING RECORD SHOWS A LACK OF SUPPORT FOR ADOPTION OF TLPS RULES.

The record demonstrates that no party truly supports adoption of the proposed rules for reasons that will advance the public interest. DISH Network Corporation (“DISH”) and Iridium Constellation LLC offered general support on certain aspects of Globalstar’s proposal, but only in support of their own interest in expanding use of the Big LEO band for broadband and other services.² Though it supported amendment of the Commission’s rules, Oceus Networks Inc. acknowledges that the Commission “should appropriately address interference and other concerns [and] take the necessary steps to enable the full benefits of this new service while ensuring existing user needs are accommodated.”³ Similarly, Sprint Corporation “generally supports” Globalstar’s proposal, but acknowledged its concerns about potential interference.⁴ NTCH, Inc. uses its Comments to point out that Globalstar’s proposal is superior to DISH’s AWS-4 plans, but NTCH plainly mischaracterized the record in stating without factual support that TLPS “would be open to all current users so that it does not become a de facto expropriation of the band for Globalstar’s proprietary use” and that the proposed regulatory approach “does not trammel the rights and expectations of users of the adjacent band.”⁵

By contrast, and as further described below, the Comments expressing concerns over Globalstar’s technical plans are specific and represent diverse interests. Significantly, no Comments opposing Globalstar’s plans were filed by parties claiming competitive harm, but by

² See Comments of DISH Network Corporation, IB Docket No. 13-213 (May 5, 2014); Comments of Iridium Constellation LLC, IB Docket No. 13-213 (May 5, 2014). See also Letter from Martin O’Malley, Governor of Maryland, to Tom Wheeler, FCC Chairman, IB Docket No. 13-213 and ET Docket No. 13-49 (May 30, 2014) (generally supporting additional spectrum for mobile use, but with no acknowledgement of any interference or technical issues).

³ Comments of Oceus Networks Inc., IB Docket No. 13-213 (May 5, 2014) at 6.

⁴ Comments of Sprint Corporation, IB Docket No. 13-213 (May 5, 2014) (“Sprint Comments”) at 1.

⁵ Comments of NTCH, Inc., IB Docket No. 13-213 (May 5, 2014) at 3.

those interests legitimately concerned about the potential for harmful interference to fixed wireless broadband service providers throughout the country,⁶ Wi-Fi hotspots,⁷ alarm systems and public safety,⁸ medical devices,⁹ machine-to-machine communications,¹⁰ Bluetooth operations,¹¹ broadcast auxiliary services¹² and 2.5 GHz operations.¹³ The lack of current support sends a strong signal that Globalstar's proposal is not acceptable.

II. THE RECORD DEMONSTRATES A NEED FOR MEANINGFUL FIELD TESTING TO DETERMINE THE EXTENT TO WHICH TLPS OPERATIONS WOULD INTERFERE WITH PART 15 DEVICES.

In its Comments, WISPA explained that further consideration of Globalstar's TLPS proposal was warranted, but that serious questions remained regarding the potential for harmful interference to Part 15 devices and the possibility that access to the 2473-2483.5 MHz frequencies would be limited to Globalstar's unnamed terrestrial partners. WISPA strongly supported field testing of the Globalstar TLPS equipment to determine whether and to what extent harmful interference to Part 15 devices would result, and observed that Commission precedent established a legal basis for such testing.¹⁴ WISPA noted the absence of any reliable and assessable test data in the record.

Not surprisingly, other commenters expressed similar concern about the potential for harmful interference that TLPS operations could cause. In opposing Globalstar's proposal, the

⁶ See Comments of WISPA, IB Docket No. 13-213 (May 5, 2014) ("WISPA Comments").

⁷ See Comments of Cisco Systems, Inc., IB Docket No. 13-213 (May 5, 2014) ("Cisco Comments") at 5; Comments of Wi-Fi Alliance, IB Docket No. 13-213 (May 5, 2014) ("Wi-Fi Alliance Comments") at 6-7; Comments of the National Cable & Telecommunications Association, IB Docket No. 13-213 (May 5, 2014) ("NCTA Comments") at 3.

⁸ Comments of the Alarm Industry Communications Committee, IB Docket No. 13-213 (May 5, 2014) ("AICC Comments") at 2.

⁹ Comments of Bluetooth Special Interest Group, IB Docket No. 13-213 (filed May 5, 2014) ("Bluetooth SIG Comments") at 4.

¹⁰ See NCTA Comments at 3.

¹¹ See Bluetooth SIG Comments at 1.

¹² See Comments of the Society of Broadcast Engineers, Incorporated, IB Docket No. 13-213 (May 5, 2014) ("SBE Comments") at 2.

¹³ See Sprint Comments at 1-2.

¹⁴ See *id.* at 3-5.

Wi-Fi Alliance agreed with WISPA that the lack of any spectral separation between Channel 11 and Channel 14 could result in adjacent-channel interference and increased congestion for existing users.¹⁵ The Bluetooth Special Interest Group (“Bluetooth SIG”) stated that a TLPS network operating at 2480 MHz “has a huge potential for causing catastrophic failures of Bluetooth LE devices, including the medical devices now under development and in the process of being deployed.”¹⁶ The National Cable & Telecommunications Association (“NCTA”) correctly observed that:

unlicensed wireless operations in the 2.4 GHz band have been so successful and utilize the band so intensively that the 2.4 GHz band is becoming congested. This congestion means reduced performance for Wi-Fi and other unlicensed broadband networks, in terms of both coverage and speed. . . . Any Commission action that disrupts this band could have great consequences for the country.¹⁷

In its Comments, Globalstar again failed to address any of the interference concerns. Instead, it overlooked the negative impact its operations could have on the millions of unlicensed devices operating in the 2.4 GHz band, and simply stated that “TLPS would coexist successfully with other unlicensed operations below 2483.5 MHz” and “the Commission’s rules do not protect unlicensed services from interference, and those services must accept any such interference from other licensed or unlicensed operations.”¹⁸ After selectively citing phrases from Commission proceedings, Globalstar concluded that “[a]s long as TLPS complies with the Commission’s Part 15 rules, these unlicensed parties have no basis for arguing against low power broadband service at 2473-2483.5 MHz.”¹⁹ In effect, Globalstar is attempting to address the purported spectrum crunch by pushing its own plan even if that means interfering with and reducing the amount of spectrum available for the millions of devices that are already in service.

¹⁵ See Wi-Fi Alliance Comments at 10.

¹⁶ Bluetooth SIG Comments at 4. See also AICC Comments at 5.

¹⁷ NCTA Comments at 4 (footnote omitted).

¹⁸ Comments of Globalstar, IB Docket No. 13-213 (May 5, 2014) (“Globalstar Comments”) at 30.

¹⁹ *Id.* at 32.

This attitude apparently explains Globalstar’s reluctance to provide any reliable test data showing the extent to which its proposed TLPS operations on Channel 14 would interfere with unlicensed operations on Channel 11, an omission noted by several commenters.²⁰ As further evidence of Globalstar’s position, Sprint, licensee of Channel BRS-1 above the 2495 MHz edge of Wi-Fi Channel 14, indicated that Globalstar has provided it with technical information, but that “[a]t a minimum, Globalstar should acknowledge its interference protection obligations and provide the Commission, *and all parties participating in this proceeding*, the necessary technical information to fully assess the impact TLPS will have on operations in adjacent spectrum bands.”²¹ The Wi-Fi Alliance cogently explained that the technical information Globalstar previously submitted in the record was only a summary, did not describe the test conditions and set-up and showed that the testing occurred in a controlled environment.²² As Bluetooth SIG also observed, the “test summary indicates that the tests were apparently run under highly controlled conditions, in channel 14, where no interference exists, and then compared to Wi-Fi operation in the congested channel 6.”²³ It further stated that “[w]e would never accept a summary in lieu of a full and comprehensive test plan, one that we could duplicate to corroborate the results, and we would not expect the Commission to accept it either.”²⁴ WISPA echoes these statements.

The list of parties asking for interference or compatibility testing is long and diverse, and the Commission cannot ignore the record or its authority to require testing. Rather, the

²⁰ See, e.g., WISPA Comments at 7; AICC Comments at 6; Comments of ARRL, the National Association for Amateur Radio, IB Docket No. 13-213 (May 5, 2014) (“ARRL Comments”) at 7; SBE Comments at 7-8.

²¹ Sprint Comments at 3 (emphasis added). Noting the lack of technical specifications in the record, Sprint also stated that “the Commission must examine the potential interference issues in the unlicensed portion of the band before it can move forward with permanent rules permitting TLPS.” *Id.* at 4.

²² See Wi-Fi Alliance Comments at 8-9. See also WISPA Comments at 7; AICC Comments at 6; ARRL Comments at 7; SBE Comments at 7-8.

²³ Bluetooth SIG Comments at 3.

²⁴ *Id.* at 5.

Commission should exercise its authority and do what it did almost 20 years ago under nearly identical circumstances – require field testing and adopt a rule requiring the newcomer to protect a vast ecosystem of consumer devices from interference. Though conveniently ignored by Globalstar, in 1995 the Commission adopted Section 90.353(d) to require 900 MHz Multilateration-Location Monitoring Service (“M-LMS”) licensees “to demonstrate through *actual field tests* that their systems do not cause unacceptable levels of interference to 47 CFR part 15 devices.”²⁵ The Commission was concerned – as it must be here – about the presence of “several million Part 15 devices . . . used every day to provide a wide variety of valuable services to the American public.”²⁶ The Commission’s decision there was not without concern or dissent, for the same reasons that underscore the concerns of Part 15 users today – the “potential bog of interference problems”²⁷ and the belief “that the record in this proceeding offers little indication regarding the potential implications for all interested parties, including the consumers and manufacturers of many Part 15 devices.”²⁸ The Commission further cited its “expectation that such testing be accomplished through close cooperation between multilateration systems users and operators of Part 15 systems.”²⁹

As WISPA,³⁰ the Wi-Fi Alliance³¹ and NCTA³² all discussed, the *M-LMS Report and Order* should guide the Commission’s consideration here. The facts are strikingly similar – a new service that would operate alongside millions of operating unlicensed consumer devices with a record devoid of any information or understanding about “real-world” interference and its

²⁵ See *Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicular Monitoring Systems*, 10 FCC Rcd 4695, 4737 (1995) (“*M-LMS Report and Order*”) (emphasis added). See also Section 90.353(d).

²⁶ *M-LMS Report and Order* at 4699.

²⁷ *Id.* at 4763 (Concurring Statement of Commissioner James H. Quello).

²⁸ *Id.* at 4765 (Dissenting Statement of Commissioner Andrew C. Barrett).

²⁹ *Id.* at 4737.

³⁰ See WISPA Comments at 3-4.

³¹ See Wi-Fi Alliance Comments at 7-8.

³² See NCTA Comments at 16-17.

impact on American consumers. The Commission’s public interest mandate compels nothing less than transparent, complete and reliable testing of Globalstar’s TLPS equipment and unlicensed devices operating on 2400-2483.5 GHz frequencies.

III. THE RECORD SHOWS CONCERN OVER THE POTENTIAL PRIVATIZATION OF THE 2473-2483.5 MHz FREQUENCIES.

Globalstar’s Comments do little to dispel concerns that Globalstar’s “latest business plan”³³ is to privatize use of the unlicensed 2473-2483.5 MHz frequencies. Globalstar reiterated its proposed reliance on a “managed approach that prevents unauthorized use”³⁴ and a desire to associate only with unnamed and undescribed “terrestrial partners,”³⁵ leading to the obvious conclusion that not everyone with a certified device will have access to the unlicensed portion of Channel 14. WISPA and the Wi-Fi Alliance have questioned this approach,³⁶ and Globalstar’s Comments provide no comfort to alleviate these concerns. The Commission has insufficient data upon which to conclude that the public commons of the 2.4 GHz band is not privatized for managed use by Globalstar and its “terrestrial partners” to the exclusion of the rest of the public.

The “uncontrolled, ‘wild west’ conditions” that Globalstar ascribed to current use of Channels 1, 6 and 11³⁷ are precisely the conditions that have created the platform of innovation that has made Wi-Fi and other unlicensed uses so astoundingly popular. To the extent Globalstar is concerned about interference to its MSS operations that may result from Part 15 devices using Channel 14, those concerns can be addressed by simply preserving the *status quo* – retention of existing out-of-band emission limits and rejection of Globalstar’s proposal.

³³ Cisco Comments at 5; Comments of the Wireless Communications Association International, IB Docket No. 13-213 (May 5, 2014) at 4.

³⁴ Globalstar Comments at 1.

³⁵ *Id.* at 15.

³⁶ *See, e.g.*, WISPA Comments at 8; Wi-Fi Alliance Comments at 13 (“no evidence that the public will be better served by Globalstar’s privately operated system than by widely deployed and easily accessible Wi-Fi services”); Cisco Comments at 3 (“TLPS will be nothing more than a paid Wi-Fi offering”).

³⁷ Globalstar Comments at 21.

IV. ADOPTION OF RULES FOR TLPS BASED ON THE EXISTING RECORD WOULD BE CONTRARY TO THE PUBLIC INTEREST.

Finally, WISPA is constrained to point out the irony in Globalstar's public interest commitments. Globalstar is quick to offer 20,000 free access points and provide MSS free in federal disaster areas,³⁸ but it has no interest in acknowledging the public interest benefits that are currently being delivered over the 2.4 GHz band today and the harms that could befall existing users if Globalstar's TLPS becomes reality. The Commission cannot substitute the benefits of the existing 2.4 GHz ecosystem for the potential benefits of an interfering service. To quote Cisco, "[w]hatever the marginal benefits of Globalstar's TLPS may be, they do not justify jeopardizing the ability of the public at large to make use of the 2.4 GHz unlicensed allocation for Wi-Fi or any of the many other popular uses of the unlicensed 2.4 GHz commons."³⁹

³⁸ *See, e.g.*, Globalstar Comments at 40-41.

³⁹ Cisco Comments at 7.

Conclusion

Globalstar cannot hide behind its narrow view of Commission precedent to forego testing for interference to millions of consumer devices operating in the 2400-2473 MHz and 2473-2483.5 MHz bands. The record to date omits sufficient technical information necessary for the Commission to adopt its proposed rules. Until testing shows that existing Part 15 devices would not be adversely affected, WISPA must oppose adoption of the proposed rules.

Respectfully submitted,

WIRELESS INTERNET SERVICE PROVIDERS ASSOCIATION

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